Links to activities used during follow up days at Immaculata University (Aug. 15 and Aug. 16, 2013)

Dr. Del Ferster

**2 Dimensional Geometry**

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| Activity and Description | Link or file information |
| 1. Dropping coins on a grid | <http://www.mathsisfun.com/activity/coin-grid.html> |
| A lesson focused on geometric probabilities, making use of pennies, and a previously printed grid paper which can be accessed from the website. I believe this could be used successfully at ELEM and MS levels, and with a few tweaks could be adapted to use at HS levels too. | |
| 2. Table for 22 (A real world geometry lesson) | <https://www.teachingchannel.org/videos/real-world-geometry-lesson?fd=1> |
| A video from teachingchannel.org. I'm not sure if you have to subscribe to view it, but subscription is free. I'm providing handouts that are referenced in the lesson, in case you want to try it with your class. | |
| 3. Theme Park Geometry | ELEM source: See PDF file named:  amusement\_park geometry.pdf |
| HS source: See PDF file named:  End of year project to design an amusement park (HS level) |
| 2 different links here, one that is a very good ELEM/MS set and a second that involves higher math, such as trig, that would be useful at the HS level | |

**3 Dimensional Geometry**

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| Activity and Description | Link or file information |
| 1. Popcorn Anyone | [**http://illuminations.nctm.org/LessonDetail.aspx?id=L797**](http://illuminations.nctm.org/LessonDetail.aspx?id=L797)**.** |
| A lesson that challenges students to create prism, and cylinders from a sheet of paper that will maximize volume. As an added treat, students can eat the popcorn. Frankly, I'd hold out for kettle corn. :) I believe that you could use this lesson successfully at almost any level. HS students can even look at it from a calculus perspective. | |
| 2. Geometric Treats | See PDF file named:  16 geometric treats |
| This lesson combines a lot of geometry with art (if you're looking for interdisciplinary lessons). The shapes described tend to be pretty complex, so I would guess that it's probably best used at a MS or HS level. However, I think ELEM students would like the concept: you'd just have to make some needed adjustments and modifications. | |
| 3. Let's get in Shape | See PDF file named:  Lets\_get\_in\_shape |
| In this unit, students will explore geometric solids. Using various hands-on activities, class discussions, literature & art, students will identify the properties of solid geometric figures and analyze the relationship between plane and solid figure surfaces. There is an emphasis on faces, vertices, and edges. Certainly could be used with MS classes too, with minimal modifications, I would guess. | |

**Graphical Statistics**

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| Activity and Description | Link or file information |
| 1. Two Way Frequency Table set | See PowerPoint file named:  2 way frequency table presentation |
| A quick look at 2 way frequency tables, via a short PowerPoint. Certainly could be used at any grade level. | |
| 2. A look at various graphical representations | See PDF file named:  Comparing data sets graphically |
| This set of problems deals with back to back stem plots, box plots, and histograms. Students are asked to create such plots, and answer questions dealing with spread, tails, etc. I believe that these problems are useful for all grade levels, although you might have to modify them a bit for lower elementary grades. | |
| 3. A demonstration of the median, mean, box plot app from NCTM | http://illuminations.nctm.org/ActivityDetail.aspx?ID=160<http://illuminations.nctm.org/ActivityDetail.aspx?ID=160> |
| This app allows the user to input a data set, one by one, via dots, and instantly provides information regarding mean and median. When enough data has been entered, the app will generate a box and whisker plot, as well. NCTM recommends it for use in grades 6-12, | |
| 4. A demonstration of the McDougall Littell Classroom app | <http://www.classzone.com/cz/books/algebra_2_2011_na/get_chapter_group.htm?cin=11&rg=animated_math&at=animations&npos=4&spos=11&var=animations> |
| I'm going to illustrate a nice application that you can use with students to explore measures of central tendency and dispersion. I think that you could use it with all grade levels, and it's self paced. The application is found on McDougal Littell's classzone.com site. | |

**Numerical Statistics**

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| Activity and Description | Link or file information |
| 1. Learning Channel video dealing with statistical analysis | <https://www.teachingchannel.org/videos/statistical-analysis-lesson?fd=1> |
| This Learning Channel video challenges students to analyze data dealing with the greatest homerun hitter in Yankee history. | |
| 2. Automated z score tables and overview of normal distributions | Automated z table:  <http://www.mathsisfun.com/data/standard-normal-distribution-table.html>  Overview of normal distributions:  <http://www.mathsisfun.com/data/standard-normal-distribution.html> |
| The first is a pretty nice automated z chart, where you can use a slider and see how the areas change when the z scores change. The second of the links is a nice overview of z scores and the normal curve. Most likely these are most useful at the HS level. | |
| 3. Comparing 2 data sets in EXCEL | [http://www.kscience.co.uk/as/module5/ttest.htm#s3](http://www.kscience.co.uk/as/module5/ttest.htm%23s3) |
| This activity shows how to use EXCEL to compare means and standard deviations for 2 different data sets. The step by step instructions show how to enter data into cells, use built in formulas to calculate statistical values, and generate charts. | |